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The Factors That Are Related to Native American Community College Students' Intent to Persist

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THE FACTORS THAT ARE RELATED TO NATIVE AMERICAN COMMUNITY
COLLEGE STUDENTS' INTENT TO PERSIST

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ABSTRACT

The Factors That Are Related to Native American Community College Students' Intent to Persist

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More than half of Native American higher education students choose community colleges as their institution of choice. However, when compared with other ethnic groups, Native American/Alaska Natives (NA/AN) students earn the second-lowest number of associate degrees and the lowest number of bachelor's degrees. Despite this substantive gap, few studies have explored the factors related to Native American community college students' intent to persist. With the projected population surge of NA/AN residents over the next 15 years, more research on the factors related to Native American community college students' intent to persist in college is warranted.

This ex post facto study of 2010 survey data from the Center for Community College Student Engagement examined the relationship between the following educational benchmarks and Native American community college students' intent to persist in college: (a) academic challenge, (b) active and collaborative learning, (c) student effort, (d) student-faculty interaction, and (e) support for learners. Student-faculty interaction and support for learners were found to be predictors of students' intent to remain enrolled in college.

This study also explored the relationship between students' participation in extracurricular activities and their intent to persist in college. The number of hours in which students participated in extracurricular activities was statistically significant to their intent to persist in college. The frequency at which students participated in student organizations was also positively associated with their intent to persist.

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Chapter 1

Introduction

Community colleges educate 44% of undergraduate students in the United States, and 52% of all Native American undergraduate students (American Association of Community Colleges, 2009). The same percentage of Hispanic undergraduate students are enrolled in community colleges, followed by 45% of Asian/Pacific Islanders and 43% of African-Americans. However, Native American/Alaska Natives (NA/AN) earn the second-lowest number of associate degrees and the lowest number of bachelor's degrees when compared with all other ethnic groups (DeVoe & Darling-Churchill, 2008). According to the U.S. Census Bureau (2008), in the next 15 years, the population of NA/AN residents is purported to increase by 25%. Unfortunately, NA/AN students regularly encounter obstacles to their academic success that are largely due to their dwindling persistence and graduation rates, including low expectations from instructors (Campbell, 2007). In addition, community colleges were NA/AN students' higher education institution type of choice until 13 years ago, when their interest and enrollment shifted to four-year colleges and universities (DeVoe & Darling-Churchill, 2008). Despite these facts, few institutions of higher education have examined the factors that influence their intent to persist in college (Campbell, 2007; Guillory & Wolverton, 2008; Huffman, 2001). Of those, the majority have focused on students enrolled in four-year colleges and universities.

One theme, however, that has remained consistent throughout the limited research published on the persistence of NA/AN students is the importance of their involvement in extracurricular activities (Campbell, 2007; Guillory & Wolverton, 2008). NA/AN students who participate in extracurricular activities experience higher persistence and graduation rates than those who do not (Campbell, 2007). This aligns with the research that has been conducted on the

general population of college students, which overwhelmingly concludes that, in order to succeed in college, students must be both academically and socially engaged in college life (Astin, 1984; Furr & Elling, 2002; Leppel, 2005; Mannan, 2001; Murray & Hall, 2001; Woosley, 2003). Moreover, students who demonstrate the intent to remain enrolled in college are more likely to re-enroll in the institution than those who do not indicate whether or not they plan to return (Cabrera, Nora, & Castaneda, 1993). In order to bridge the gap between the high number of Native American community college students enrolled in college and the low number that actually graduate, it is imperative that additional research is conducted in this area. This study addressed this pressing issue by exploring the factors that influence Native American community college students' intent to persist in college.

Background

The majority of college students who drop out of the college or university they attend do so within the first two years of their enrollment (ACT, 2002, as cited in Yazedijan et. al, 2009). Approximately 50% of these students withdraw before they begin their second year (Survey of Entering Student Engagement, 2009). This is largely due to the degree of adjustment first-year college students must overcome (Pascarella, Wolniak, Pierson, & Terezini, 2003, 2004; Tinto, 1993). Many researchers have found that student persistence and retention is related to several factors, including academic and social integration and participation in extracurricular activities. In 1975, Tinto conducted landmark research in this area and concluded that college students undergo a three-stage process of separation, transition, and incorporation. He found that there was a direct relationship between college students' grade point average (GPA) and their persistence in college. Subsequent studies confirmed that, the more students are engaged in college life academically and socially, the more likely they are to continue to attend college

(Mannan, 2001; Pascarella et. al, 2003, 2004; Tinto, 1975, 1993; Wilcox, Winn, & Fyvie-Gauld, 2005). Similarly, students who drop out often do so because they are unsuccessful in adjusting to the college experience (Astin, 1984; Kalsner & Pistole, 2003; Kerr, Johnson, Gans, & Krumrinem, 2004). As a result of these findings, student engagement quickly became the focal point for higher education institutions, as retention rates and students' learning are directly correlated to student engagement (Pascarella, et al., 2003, 2004; The Community College Survey of Student Engagement, 2010c; Tinto, 1993).

As a part of this increased focus, The Community College Survey of Student Engagement (CCSSE) was established by the Community College Leadership Program at the University of Texas at Austin in 2001 (CCSSE, 2010c). To develop the survey, CCSSE partnered with the National Survey of Student Engagement, which has been distributing a similar survey to students at four-year educational institutions since 1998. The purpose of the Community College Student Report – which is CCSSE's survey instrument – is to improve student learning and retention and to inform the public about the quality of community colleges. Nearly every item on the survey was developed as a result of published research in student engagement, retention, and/or persistence (CCSSE, 2010a). Each year, CCSSE selects a special focus area about which additional survey questions are asked. CCSSE confers with its member colleges and on current research in the field when selecting these topics. The special focus area of the 2010 survey is deep learning. Specifically, the items address topics including how often students (a) compile ideas or concepts from coursework when completing assignments; (b) incorporate diverse perspectives in assignments and discussions; (c) exercise empathy; and (d) explore strength and weaknesses of their views (CCSSE, 2010f). Previous special topic areas have included financial aid, the entering student experience and technology. CCSSE believes the inclusion of the special

focus area is important because it allows the survey items to remain current yet still includes all of the items from the core instrument. The findings of the report have repeatedly demonstrated a relationship between student engagement and academic success and persistence. The 2010 survey is a compilation of data from 403,428 students from 658 community colleges who were surveyed in 2008, 2009, and 2010 (CCCSE, 2010b).

Purpose and Significance of the Study

The purpose of this ex post facto study was to explore (a) the factors that are related to Native American community college students' intent to persist and (b) the relationship of Native American community college students' participation in extracurricular activities on their intent to persist. The literature that explores the factors associated with Native American community college students' intent to persist is extremely limited. Therefore, with the information from this study, community colleges may acquire a better understanding of how to target their persistence and retention strategies to Native American students. Consequently, this should help increase Native American community college students' intent to persist and, ultimately, the number of Native American community college graduates (Guillory & Wolverton, 2008). College degree-holders are also more likely to volunteer for civic organizations and vote (Bam & Payea, 2004; Solutions for Our Future, 2009). Moreover, areas with high populations of college-educated residents demonstrate lower crime rates than localities with fewer number of college degree holders (Baum & Payea, 2004).

Although the literature has explored the relationship between college students' participation in extracurricular activities and persistence, few researchers have investigated the relationship between Native American community college students' participation in extracurricular activities and their intent to persist. If the results of this much-needed study

mirror the findings of previous studies on college students' participation in extracurricular activities, community colleges may implement strategies to increase the number of extracurricular activities offered and/or develop targeted marketing plans publicizing extracurricular activities to current and potential Native American students. Conversely, if the results of this study do not support the results of the current research, community colleges may focus their persistence efforts elsewhere.

Definition of Terms

The *Center for Community College Student Engagement (CCCSE)* provides resources to institutions and lawmakers to promote enhancements in students' achievement, persistence and learning (CCCSE, 2010a). The CCCSE conducts several national surveys, including the Community College Survey of Student Engagement.

The *Community College Student Report* is CCSSE's survey instrument, which measures student engagement (CCSSE, 2010c).

The *Community College Survey of Student Engagement (CCSSE)* surveys students attending community and technical colleges throughout the United States; in Canadian provinces including British Columbia, Nova Scotia and Ontario; as well as in other areas such as the Marshall Islands, to determine the factors that influence their academic engagement (CCSSE, 2010c).

Extracurricular activities are educational activities in which students enrolled in a college or university may participate. The events are hosted by the institution and are not part of the educational curriculum (Huang & Chang, 2004; McNamara & Cover, 1999; Woosley, 2003).

Intent to persist is the extent to which the student's goal is to remain enrolled in a college or university during the following semester and/or year (Borglum & Kubala, 2000; Braxton, Miliam, & Sullivan, 2000; Solís, 1995).

Native Americans and *Alaska Natives* have origins to the original people of North and South American and maintain tribal or community affiliation (U.S. Census Bureau, 2000).

Persistence is the propensity for a student enrolled at a college or university to remain enrolled in the university during the following semester and/or year (Astin, 1984; 1999; Heavyrunner & DeCelles, 2002; McClellan, 2005; Sandler, 2000, Tinto, 1993).

Student engagement is the extent to which students are actively involved with college employees, faculty members, students, and in the classroom (CCSSE, 2010g).

Research Questions and Hypotheses

To contribute to the literature regarding Native American community college students' intent to persist, this ex post facto study addressed the following research questions and hypotheses:

1. *What factors are related to the intent to persist for Native American community college students?* This question explores the factors of student engagement as identified in CCSSE's survey instrument, *The Community College Student Report* (CCSSE, 2010b). These factors are segmented into the following benchmarks: (a) academic challenge, (b) active and collaborative learning, (c) student effort, (d) student-faculty interaction, and (e) support for learners. The first hypothesis that guided this study predicts the following:
The following factors are hypothesized to relate significantly to Native American students' adjustment: (a) academic challenge, (b) active and collaborative learning, (c) student effort, (d) student-faculty interaction, and (e) support for learners.

2. *What is the relationship between Native American community college students' participation in extracurricular activities and their intent to persist?* This question explores the extent to which Native American community college students participate in extracurricular activities as identified in CCSSE's *The Community College Student Report*. To answer this question, the researcher examined the relationship between the number of hours per week in which the respondents participate in extracurricular activities (ranging from zero to more than 30 hours) and their intent to remain enrolled at the institutions which they are currently attending. The second hypothesis that guided this study predicts the following: *The number of hours in which Native American community college students participate in extracurricular activities relates to their intent to persist.*

Overview of Methodology

Through this ex post facto study, the researcher explored data from CCSSE's 2010 *The Community College Student Report*, which consists of survey results from Native American students who were administered the survey from 2008-2010 in five benchmark categories. In order to discern the relationship between students' intent to persist and each benchmark category (i.e., [a] academic challenge, [b] active and collaborative learning, [c] student effort, [d] student-faculty interaction, and [e] support for learners), the responses were correlated with students' responses to the question: "When do you plan to take classes at this college again?" The researcher obtained approval from Old Dominion University's Institutional Review Board and CCSSE.

The researcher used the Statistical Program for the Social Sciences (SPSS) to analyze the data. To determine the predictors of Native American community college students' intent to persist, the survey responses from Native American students were segmented into five scales,

including active and collaborative learning, student-faculty interaction, and support for learners (CCSSE, 2010a). Cronbach's alpha was also used to determine the reliability of each scale, which was followed by a multiple regression to ascertain the scales that account for the variance in students' intent to persist. The researcher also segmented students' intent to persist into a scale comprised of survey responses that corresponded with this item.

SPSS was also used by the researcher to determine the relationship between Native American community college students' participation in extracurricular activities and their intent to persist. Next, the researcher analyzed the survey responses that address participation in extracurricular activities. To ascertain whether the scale accounts for the variance in students' intent to persist, the researcher conducted a multiple regression.

Limitations

Because ex post facto data from CCSSE was used for this study, the researcher was unable to oversee the data collection process and, thus, cannot determine the propensity of threats to internal validity (Creswell, 2003). Because the survey is anonymous, the researcher is unable to ascertain whether the respondents who identified themselves as Native American did so accurately. The researcher is also unable to oversee the removal of respondents who self-identified as "other Native American," as this was conducted by a CCSSE employee. In both of these instances, threats to external validity could result (Creswell, 2003).

Conclusion

While community colleges educate more than half of the Native Americans in the United States, the number of Native Americans who graduate from college is drastically low (DeVoe & Darling-Churchill, 2008). Moreover, the number of Native Americans living in the United States is expected to increase by one-quarter in the next 15 years (U.S. Census Bureau, 2008). In light

of the current economic crisis, it is critical that residents remain competitive now more than ever, and obtaining a college degree is one way to help ensure that this occurs.

Individuals who do not hold an academic degree earn approximately \$20,000 less per year than individuals who hold a bachelor's degree (U.S. Census Bureau, 2009). Residents who hold an associate degree will earn \$400,000 more in their lifetime than those who do not possess anything beyond a high school diploma, and those with bachelor's degrees will earn nearly \$1 million more in their lifetime (U.S. Census Bureau, 2002). Therefore, a low rate of degree attainment could adversely impact the economic health of our communities, as individuals with academic degrees are more likely to financially support local organizations both by purchasing products or services and/or by donating funds to nonprofit organizations.

Not only does obtaining an academic degree help to improve our economic stability, but it can also enhance graduates' lives, as they may experience increased cognitive learning (Bowen, 1996). It is crucial, therefore, that community colleges increase and enhance their efforts to develop and implement tactics to increase the number of Native American college graduates. This study provides quantitative research about the factors that influence Native American community college students' intent to persist.

Chapter 2

Review of the Literature

The population of NA/AN U.S. residents is projected to increase more than 25% by 2025 (U.S. Census Bureau, 2008), and the number of NA/AN students who have earned an associate, master's, and/or doctoral degree has more than doubled since 1976 (DeVoe & Darling-Churchill, 2008). Only 26% of NA/AN students were enrolled in postsecondary institutions in 2006. NA/AN students enrolled at higher education institutions continue to experience a plethora of barriers to their success including a lack of role models, stereotyping, and low expectations from instructors (Campbell, 2007). At 6.1%, NA/AN college students are second to African American students in the lowest number of associate degrees earned (DeVoe & Darling-Churchill, 2008). However, only 15% of NA/AN college students earn bachelor's degrees compared to 24%, 31%, 49%, and 51% of Hispanic, African American, White, and Asian/Pacific Islander students, respectively. Similarly, only 1.7% of NA/AN students earn a master's degree or higher, compared to 2.1% of African American students, 2.5% of Hispanic students, 6.4% of White students, and 8.1% of Asian/Pacific Islander students. Despite these troubling statistics, NA/AN students represent an often marginalized group about whom little research regarding persistence and retention has been conducted (Jefferies, Nix, & Singer, 2002; Larimore & McClellan, 2005; McClellan, Fox, & Lowe, 2005).

The number of NA/AN students who attended four-year educational institutions surpassed those who attended two-year postsecondary institutions for the first time in 1997, and this trend has remained consistent (DeVoe & Darling-Churchill, 2008). The majority of the studies that have been conducted on the persistence and retention of Native American students, however, focus on students at four-year postsecondary institutions (Anagnopoulos, 2006;

Campbell, 2007; Guillory & Wolverton, 2008; Katz, 2005; Heavyrunner & DeCelles, 2002; Huffman, 2001; Jackson, Smith, & Hill, 2003; Shotton, Oosahwe, & Cintrón, 2007). Given that community college students have exhibited a higher propensity to withdraw from college than students enrolled at four-year institutions, it is imperative that researchers explore ways to increase Native American community college students' intent to persist (Astin, 1984; 1999; Heavyrunner & DeCelles, 2002; McClellan, 2005; Sandler, 2000).

Increasing the number of Native American community college students who graduate from college will positively impact the quality of life in our communities (Baum & Payea, 2004; Bowen, 1996). Individuals who attain academic degrees experience increased cognitive learning and emotional and moral development (Bowen, 1996). Individuals who have graduated from institutes of higher education help to shape the values and attitudes of people, which may ultimately help to positively influence social institutions and practices, cultural patterns, and the economy.

An educated citizenry results in decreased unemployment, poverty levels, and dependence on government financial assistance programs (Baum & Payea, 2004). Individuals with a bachelor's degree or higher earn \$20,000 more annually than those who hold a high school or general educational development diploma (U.S. Department of Education, 2009). Consequently, these individuals contribute more to tax revenues than those who do not earn a college degree (Bam & Payea, 2004; Bowen, 1996). Moreover, 6 out of every 10 positions require skills acquired by individuals who possess a college degree (McDonough, 2004). Individuals who earn college degrees are also more likely to volunteer for civic organizations and vote (Bam & Payea, 2004). Localities with high populations of college-educated residents also have lower crime rates than areas where the majority of the residents are not college

educated (Baum & Payea, 2004; Merisotis, 1998). Consequently, further exploration of the factors that are related to Native American community college students' intent to persist will help add to the body of research in this currently sparse area and, ultimately, help to increase the Native American's persistence in higher education (Cabrera, Nora, & Castaneda, 1993).

While several researchers have addressed the positive impact of college students' participation in extracurricular activities on persistence, few researchers have addressed this topic among Native American college students (Furr & Elling, 2002; Leppel, 2005; Mannan, 2001; Murray & Hall, 2001; Woosley, 2003). However, the research that has been conducted in this area has drawn conclusions similar to the research that has not specifically addressed Native American college students, which has concluded that students who are engaged in extracurricular activities are more likely to persist than those who do not (Anagnopoulos, 2006; Campbell, 2007; Furr & Elling, 2002; Huffman, 2001; Leppel, 2005; Mannan, 2001; Murray & Hall, 2001; Woosley, 2003). By conducting additional studies examining the impact of participation in extracurricular activities on Native American students' persistence, researchers will help build to the currently insufficient body of research in this vital area (McClellan et al., 2005). This information will, therefore, help to provide community college personnel with data specific to this population, which is currently underrepresented both in higher education institutions and research (American Association of Community Colleges, 2009; McClellan et al., 2005).

Community colleges leaders must address and respond to accountability standards established by a variety of external entities, including governing boards, state and federal governments, and accrediting agencies (CCSSE, 2010a). A key factor of these expectations is the assessment of retention rates and students' learning. In order to effectively address these standards, community colleges must assess the engagement of community college students

relative to the colleges' missions and diverse student populations. Consequently, it is imperative that community college leaders evaluate efforts that address students' intent to persist, as this will increase student persistence (Henry & Smith, 1994; Sandler, 2000). To this end, this chapter will summarize the extant literature focused on Native American community college students' intent to persist and will examine the following themes: (a) community colleges, including the mission and purpose; program and demographics; and underrepresented populations; (b) Native Americans in higher education – to include the background as well as the current environment; (c) persistence and college success, including research on extracurricular activities and student engagement; (d) the relationship between students' intention to persist in college and actual persistence, and; (e) the current study. Given that community colleges educate 44% of the nation's undergraduates and 52% of all Native American students, the researcher will begin by providing a brief overview of the mission and purpose, academic programs, and demographics of community colleges (American Association of Community Colleges, 2009).

Community Colleges

Mission and Purpose of Community Colleges

The community college mission is to provide individuals with access to postsecondary educational opportunities that will lead to stronger communities (Vaughan, 2000). This is accomplished through an open-access admissions policy that affords individuals from a variety of educational, cultural, and socioeconomic backgrounds the opportunity to pursue higher education (American Association of Community Colleges, 2009; Vaughan, 2000). According to Vaughan (2000), community college's commitment to open access is best described through the following analogy: each student is provided with a key representing educational achievement. Students who go to a community college will find the main door open and, therefore, will not

need the key to enter. However, the key will be needed to access certain programs within the community college, such as college transfer programs, which require prerequisites. If the keyholder is unable to access his or her desired program, the individual may pursue a variety of other options, from completing developmental coursework that will allow the individual to gain entry into his or her program of choice to training programs for immediate employment.

Programs and Demographics

There are currently 1,177 community colleges in the United States serving 11.7 million students (American Association of Community Colleges, 2009). Of these, 988 are public, 158 are in the private sector, and 31 are tribally-controlled (American Association of Community Colleges, 2009; Native American College Fund, 2009). Each community college provides programs that align with region-specific needs (American Association of Community Colleges, 2009; Cohen & Brower, 2003; Vaughan, 2000). For example, community colleges have articulation agreements with four-year institutions of higher education which allow students who meet specific criteria guaranteed transfer to the institution they choose (Cohen & Brower, 2003; Vaughan, 2000). Several other unique characteristics of community colleges include apprenticeship programs; dual enrollment programs, where high-school students may earn high school and college credits simultaneously; developmental education courses; workforce and continuing education courses and programs; and vocational certificate and degree programs (American Association of Community Colleges, 2009; Cohen & Brower, 2003; Vaughan, 2000). Each year, 612,915 associate degrees and 328,268 certificates are awarded to community college students (American Association of Community Colleges, 2009).

The average age of community college students is 29, and the population is comprised of 58% females and 42% males (American Association of Community Colleges, 2009; Cohen &

Brower, 2003). At 47%, the majority of community college students are 21 years of age or younger (American Association of Community Colleges, 2009). At 40%, the second-highest age group is 22-39. Nearly 40% of community college students are first-generation students, or students whose parents did not attend college and the same percentage attend on a full-time basis (American Association of Community Colleges, 2009). Seventeen percent of community college students are single parents. At \$2,402, the average annual tuition to attend a community college is drastically lower than that of four-year institutions, for which the average is \$6,585.

Underrepresented Populations

The number of individuals from underrepresented ethnic groups who attend college continues to increase (Laden, 1998; Livingston & Wirt, 2005; Seidman, 2005). Community colleges currently serve 46% of United States residents who are pursuing undergraduate degrees (American Association of Community Colleges, 2009). Community colleges provide millions of individuals who might otherwise have been unable to pursue higher education with the opportunity to do so, including low-income and underrepresented populations. The motivation for Native Americans, African Americans, and Hispanics to attend community colleges is often due to financial barriers (Rendón & Garza, 1995). In addition to offering a wide variety of academic programs from which students can obtain a degree or certificate and/or transfer to a four-year postsecondary institution, community colleges offer workforce development and noncredit programs (American Association of Community Colleges, 2009; Vaughan, 2000). In addition, 50% of individuals who attain bachelor's degrees attended a community college while pursuing their undergraduate studies (American Association of Community Colleges, 2009).

More underrepresented students attend community colleges than all other types of higher education institutions (Laden, 1998). Community colleges provide an opportunity for many underrepresented students to attend college (American Association of Community Colleges, 2009). Specifically, community colleges currently comprise 52% of all Native American undergraduate students, 45% of all Asian/Pacific Islanders, 43% of all African American undergraduate students, and 52% of all Hispanic undergraduate students. The enrollment and graduation of African American males in higher education institutions continues to decrease, while the enrollment and completion rates of female African American college students continue to surge (Palmer, Davis, & Hilton, 2009). The population of Hispanics is increasing faster than all other underrepresented population in the United States (Solís, 1995; U. S. Census Bureau, 2009). However, Hispanics are less likely to attend and graduate from an institution of higher education than White residents (Walker & Schultz, 2001; Yazedijan, Toews, & Navarro, 2009).

Community colleges serve approximately half of all undergraduate students within each ethnic group (American Association of Community Colleges, 2009). However, while community colleges typically serve more underrepresented students than other types of higher education institutions, the probability that students from these ethnic groups will persist in college is often low (DeVoe & Darling-Churchill, 2008; Palmer et al., 2009; Solís, 1995; Yazedijan et al., 2009). It is crucial, therefore, that community college administrators develop strategies to help increase the number of underrepresented students attending college (Palmer et al., 2009; Solís, 1995, Yazedijan et al., 2009).

Native Americans are one of the underrepresented populations about which limited information exists (McClellan et al., 2005). McClellan et al. (2005) concluded that this is

partially because Native Americans represent one of the smallest underrepresented populations in higher education and in the United States. According to Chickering (1994), institutions of higher education often view students as professionals rather than as individuals, and it is imperative that college personnel embrace each student's diversity rather than adhering to a specific model to address the student's needs. This study will help to increase the literature in this area by examining the factors that are related to Native American students' intent to persist (Cabrera et al., 1993; Chickering and Gamson, 1987; Pascarella, et al., 2003, 2004; CCSSE, 2010c; Tinto, 1993). This is particularly crucial, as researchers have concluded that students who express the intent to persist in college are more likely to do so than students who have not (Cabrera, Nora, & Castaneda, 1993). In order to comprehend the importance of increasing Native American community college students' persistence, it is crucial to provide a thorough understanding of the history and current climate of Native Americans and higher education.

Native Americans in Higher Education

Background and Overview

From 1790-1920, the U.S. Government implemented a process whereby it removed elements of Native Americans' cultural heritage from instruction and changed the focus to that of Northern European-American culture (Beck, 1995; Hoxie, 1984; Remini, 1988). Proponents of the policy felt it was necessary to develop a standard educational system that encompassed the culture of the majority of individuals (Remini, 1998). By 1923, the majority of Native American schools had been closed in the Northwestern United States, and Native American children were attending boarding schools (Marr, 2009). In the Indian boarding schools, Native American students were not allowed to speak their native languages. In addition, they were taught Christianity and were not allowed to practice or recognize tribal religions or traditions.

Unfortunately, the U.S. Government did not support higher education for Native Americans (Beck, 1995). However, some Native Americans attended and earned degrees from higher education institutions. For example, the founders of the Society of Native Americans — an organization established in 1911 that focused on improving issues impacting Native Americans — held college degrees. The organization published a journal and informed individuals about the issues impacting Native Americans.

During the 1960s and 1970s, Native Americans began to focus on regaining control of their educational institutions from the U.S. Government and personalizing them to their culture (American Indian College Fund, 2009; Beck, 1995). In the latter 1960s, the U.S. Congress conducted a two-year study whereby they concluded that Native American education was at a critical state and needed to be rectified (Beck, 1995). The researchers found that less than 20% of Native Americans who attended federal schools enrolled in college. In addition, 97% of Native American college students dropped out, and only 1 in every 100 students who earned a degree did so at the graduate level. This translates to one-half of every one percent of Native Americans earning a college degree and one percent obtaining a college degree. As a result, the first tribal college was formed in 1968 (American Indian College Fund, 2009).

Each tribal college is controlled by a tribe that is located on the reservation and is available to members of the tribe (American Indian College Fund, 2009). Contrary to the U.S. Government's removal of all aspects of Native Americans' culture from instruction during the assimilation process (Beck, 1995; Marr, 2009), tribal colleges integrate the tribes' language and culture into the curricula (American Indian College Fund, 2009).

Current environment.

Tribal colleges.

Over 40 years after the establishment of the first tribal college, there are more than 30 tribal colleges throughout the United States (American Association of Community Colleges, 2009; McClellan et al., 2005; American Indian College Fund, 2009). The faculty members are typically not Native Americans; however, tribal elders often serve in this capacity (McClellan et al., 2005). McClellan et al. (2005) concluded that students who attend tribal colleges are engaged in college life and report that they are satisfied with the college experience.

Academic programs highlighting Native American culture.

There are almost 130 Native American Studies Programs in higher education institutions across the United States (McClellan et al., 2005). Some of the higher education institutions with Native American Studies Programs include Cornell University, Dartmouth College, Stanford University, and The University of Oklahoma (Dartmouth College, 2009; Humboldt State University, 2009; University of Richmond, 2009). These programs address a variety of issues, including Native American colleges and culture; Native languages; Native American's relationship with the land; and the effect of colonization on Native Americans (Dartmouth College, 2009; Humboldt State University, 2009; McClellan et al., 2005).

Native American Studies Programs contribute greatly to students' awareness of Native American issues and societies as well as to that of faculty members, as they must keep abreast of the latest research and trends (McClellan et al., 2005; University of Richmond, 2009). Unfortunately, community colleges are not among the institutions that offer a program in Native American Studies (University of Richmond, 2009). Implementing related programs at community colleges would help to increase students' and faculty members' awareness of Native American culture (University of Richmond, 2009). According to Astin (1984), the more engaged students are in their coursework, the more likely they will be to adjust to the college environment

and succeed academically. Therefore, the offering of Native American Studies Programs could help to increase the institutional adjustment of Native American students and, therefore, their propensity to remain enrolled in the institution.

Population and institution type.

There are more than 560 NA/AN tribes in the United States (DeVoe & Darling-Churchill, 2008). As of 2006, more than 4.5 million NA/AN residents resided in the United States, comprising 1.5% of the population. NA/AN students represent 1% of all students enrolled at undergraduate institutions. Only 26% of Native American and Alaska Native students were enrolled in postsecondary institutions in 2006, compared with 58% of Asian students, 41% of White students, 33% of African-American students, and 27 % of Hispanic students (DeVoe & Darling-Churchill, 2008). However, the number of NA/AN students who have earned an associate or advanced degree has increased by more than 200% in the past 32 years. The number of NA/AN students who attend tribal colleges and universities has increased at a faster rate than those who attend non-tribally affiliated postsecondary institutions (American Indian College Fund, 2008; DeVoe & Darling-Churchill, 2008). Of the latter group, more attend four-year institutions than community and technical colleges (DeVoe & Darling-Churchill, 2008). NA/AN college students receive the second-lowest number of associate degrees of all ethnic groups and are the least likely to earn a bachelor's degree (DeVoe & Darling-Churchill, 2008). However, 55% of Native Americans pursuing undergraduate degrees are doing so at community colleges (American Association of Community Colleges, 2009).

Despite the growing number of Native American students pursuing higher education, limited research examines the factors that are related to their persistence in college, with even less specifically addressing their persistence at the community-college level (Campbell, 2007;

Guillory & Wolverton, 2008; Huffman, 2001). Thus, community colleges must develop and implement strategies to increase Native American community college students' intent to persist, as students who have expressed intent to persist are more likely to return to the institution than students who have not (Cabrera, Nora, & Castaneda, 1993). These students will graduate from college and help to improve the quality of life and economic stability in their communities by increasing the number of professionals serving their regions and contributing more to tax revenues than those who do not (Bam & Payea, 2004; Bowen, 1996). Given that family support was found to be a significant predictor of persistence for Native American college students, it is probable that these graduates will attempt to compel their family members to attend college as well, thereby further increasing the number of Native American college graduates (Guillory & Wolverton, 2008; Heavyrunner & DeCelles, 2002). The next section will provide an overview of the persistence literature which addresses both college students in general and Native American college students specifically, to include studies about the relationship between participation in extracurricular activities and persistence, and community colleges' increased focus on student engagement.

Institutional Adjustment, Persistence, and College Success

Institutional Adjustment

The factors that influence college students' adjustment to college are multifaceted (Baker & Siryk, 1984). Baker and Siryk's (1984) model explores the following four areas of adjustment: (1) academic, (2) social, (3) personal-emotional and (4) institutional – which is also referred to as goal commitment. Each of these adjustment factors were segmented into subscales addressing each item.

The academic adjustment subscale focuses on students' outlook toward their academic goals, their academic work, and the degree to which they applied themselves to their academic work (Baker & Siryk, 1984). The social adjustment subscale addresses issues including students' involvement in social activities, interpersonal relationships, and social relocation (i.e., from home to college). Baker and Siryk's (1984) personal-emotional adjustment subscale explores students' physical and psychological well-being, and the institutional adjustment subscale examines students' intent to earn a degree from the institution in which they were currently enrolled.

Baker and Siryk (1984) found that the higher students' institutional adjustment/goal commitment, the more likely they were to remain enrolled in the college they attended as freshmen. Similarly, the lower students' scored on the institutional adjustment subscale, the less likely they were to remain enrolled at their institution of original enrollment. Given that NA/AN students earn the lowest number of associate degrees when compared with all other ethnic groups, it is critical for community colleges to conduct research on factors that relate to students' institutional adjustment (DeVoe & Darling-Churchill, 2008). Community colleges must implement strategies that promote a smooth transition for Native American students into the college experience, as this will help to increase persistence rates (Baker & Siryk, 1984; Braxton, Miliam, & Sullivan, 2000; Sorey & Duggan, 2008). With more than half of Native American undergraduate students selecting community colleges as their academic institutions of choice, establishing and enhancing these efforts will ultimately increase the number of Native American community college graduates (American Association of Community Colleges, 2009; Baker & Siryk, 1984; Braxton, Miliam, & Sullivan, 2000; DeVoe & Darling-Churchill, 2008; Sorey & Duggan, 2008).

Persistence

Unfortunately, the majority of college students who leave the college or university they initially attended drop out within the first two years of their college experience (ACT, 2002, as cited in Yazedijan et. al, 2009), with nearly 50% dropping out before beginning their second year (Survey of Entering Student Engagement, 2009). Several researchers have concluded that student persistence and retention is related to institutional and individual factors including academic and social integration; participation in extracurricular activities; goals and institutional commitments; and family background (Pascarella, et al., 2003, 2004; Tinto, 1993). This is particularly crucial with first-year college students due to the degree of adjustment they must overcome (Pascarella, et al., 2003, 2004; Tinto, 1993).

Tinto (1975, 1993) conducted extensive research regarding the factors that contribute to college students' departure and persistence and postulated that a variety of characteristics – including their academic and familial background and the degree to which they are academically and socially integrated into the college — impact their academic success. Tinto (1975) posited that, in their attempt to adjust to college life, students go through a three-stage process of separation, transition, and, ultimately, incorporation. During the first stage, individuals are separating themselves from previously-held ideals and relationships in order to ensure openmindedness toward their new college experience. During the second stage, students begin to transition to the college environment, thereby preparing themselves for stage three, in which they will become fully engaged in college life. Students who are unable to transition from stage two to three will withdraw from the institution, whereas individuals who successfully adjust will persist and, ultimately graduate from the institution (Bean & Eaton, 2002; Tinto, 1975, 1993).

Nora (2002) disagrees with the first stage of Tinto's research, stating that students' familial relationships and previously-held ideals are often the impetus for the establishment and acceptance of new relationships and experiences. In many cases, maintaining strong relationships with family members results in a support network as students adjust to college (Heavyrunner & DeCelles, 2002; Nora, 2002). Studies conducted by other researchers both affirm and refute Tinto's findings on academic and social integration, with some researchers concluding that academic integration had a more significant impact on persistence than social integration (Guarino & Hocevar, 2005; Kuh & Hu, 2001), and others stating that social integration was closely related to persistence in college (Summers, 2003; Whitt, Edison, Pascarella, Nora & Terenzini, 1999).

The results of Tinto's (1975) study found that students' high school grade point average (GPA) was the best predictor of their performance in college, and the higher a college students' GPA, the more likely they are to remain enrolled in the institution. In addition, males are more likely to complete academic degree programs than female students and public institutions experience higher attrition rates than private institutions. Given that 58% of community college students are female and 84% of the community colleges in the United States are public, it would behoove community college administrators and faculty members to explore ways to increase student persistence across genders and sectors (American Association of Community Colleges, 2009).

College students who have positive experiences with other students, instructors, and college personnel are more likely to remain enrolled in the institution than those who have negative encounters (Tinto, 1993; Pascarella et al., 2003, 2004). Similarly, college students who are engaged in the college academically and socially are more likely to persist than those who are

not (Mannan, 2001; Tinto, 1975, 1993; Wilcox et al., 2005). Conversely, Borglum and Kubala (2000) did not find a relationship between academic and social integration and persistence among community college students; however, the majority of participants did not interact with instructors beyond class time. The researchers found students' goals and intention regarding whether to attain a degree or transfer to be the best predictors of their academic success. Students who withdraw from college often do so because they were unable to completely adjust to the college experience (Astin, 1984; Kalsner & Pistole, 2003; Kerr, Johnson, Gans, & Krumrinem, 2004).

First-generation college students often encounter several obstacles that serve as barriers to their success (Bryan & Simmons, 2009). Community colleges currently serve 39% of the first-generation undergraduate students throughout the United States (American Association of Community Colleges, 2009). Therefore, it is imperative that community colleges establish initiatives to help reduce the barriers to their success. Solís (1995) found that the higher Hispanic community college students' motivation to persist and commitment to attend, the more likely they were to persist in college. Similarly, Sorey and Duggan (2008) found that expressed intent to leave the institution was one of the predictors of persistence for both adult and traditional-aged community college students. Braxton, Miliam, and Sullivan (2000) concluded that the more students who (a) are socially integrated in the college, (b) indicate institutional commitment, and (c) are involved in higher order thinking activities, the higher their intent to return, which is strongly related to persistence.

College Students in General

Participation in extracurricular activities.

Several researchers have addressed the impact of college students' participation in extracurricular activities on persistence (Furr & Elling, 2002; Leppel, 2005; Mannan, 2001; Murray & Hall, 2001; Woosley, 2003). Astin's (1984) Theory of Involvement reasons that students who are academically and socially involved in their academic pursuits are more likely to persist in college than students who live and work off-campus and/or are enrolled part-time. According to Astin (1984), to accomplish this, students should segment their time between their coursework and participating in extracurricular activities, including fraternities and sororities, student government organizations, and sports. In addition, students should strive to spend a large portion of their time on the institution's campus and, if possible, reside and work on-campus. Astin (1984,1999) also concluded that students strive to meet with their instructors outside of class, as student-faculty interaction was found to be the single-most important predictor of persistence.

Astin (1984, 1999) also concluded that community college students were more likely to withdraw from college than students attending four-year institutions. Sandler (2000) echoed this by concluding that students' pursuing associate degrees were less likely to persist than students who were enrolled in a bachelor's degree program. Similarly, students who were employed full-time off campus were less likely to persist. Given that 27% of community college students who are enrolled full-time are employed in full-time positions off-campus, and 50% of students who are enrolled part-time work in full-time positions off campus, it is imperative that community college leaders strive to develop and implement programs to increase persistence and decrease attrition rates at community colleges (American Association of Community Colleges, 2009).

In 1993, Astin revisited his 1984 study and posited that the three most important factors that contribute to persistence are academic involvement, peer involvement, and student-faculty

involvement. He also reaffirmed that students who are enrolled part-time, reside off-campus and/or work-off campus were less likely to succeed academically and remain enrolled in the institution (Astin, 1999). Consequently, he recommended that institutions develop programs that increase students' involvement with faculty members and students outside of the classroom. Pascarella's (1993) findings echoed Astin's (1975, 1999), as he concluded that students who lived on campus were more involved with faculty members and their peers than students who commuted to campus. Pascarella (1993) concluded that living on campus was the single-most predictor of student involvement, as it had a stronger impact on students' interpersonal and social self-concept than on their academic self-concept.

By taking an active role in his or her entire college experience, student's learning and development will increase. Huang and Chang (2004) echoed this and found that students who participate in extracurricular activities significantly improve their affective and cognitive development. Correspondingly, Terenzini, Springer, Pascarella, and Nora (1995) found that students who participate in extracurricular activities exhibited increased intellectual capabilities. Strauss and Volkwein (2004) found that social activities and the development of friendships are predictors of students' commitment to the institution.

Maestas, Vaquera, and Zehr (2007) concluded that students who are involved in fraternities, sororities, and/or hold a leadership position in a student organization associate a sense of belonging with that institution, which is associated with student persistence. According to Woosley (2003), college personnel should establish extracurricular activities for first-year college students toward the beginning of their first semester, as this will help to increase participants' persistence. Similarly, Leppel (2005) concluded that first-year college students who participate in sports are more likely to remain enrolled at the institution. Mannan (2001)

concluded that students who participate in extracurricular activities are more likely to persist than those who do not and also recommended that college personnel compel students to become involved toward the beginning of their enrollment. According to Hu and Wolniak (2009), students who participate in extracurricular activities earn higher salaries than those who do not. This demonstrates the potential positive far-reaching impact of students' participation in extracurricular activities on the quality of life and economic stability of the communities in which they live, as they will contribute more to tax revenues (Bam & Payea, 2004; Bowen, 1996). Contrary to these studies, Furr and Elling (2002) found that college students who were involved in extracurricular activities were more likely to withdraw than students who were not.

NA/AN Students

Participation in extracurricular activities.

A recurring theme addressed by researchers regarding NA/AN students and persistence is the importance of integrating elements that address students' cultural heritage into their coursework (Campbell, 2007; Huffman, 2001). Huffman (2001) found that transcultured Native American students – or students who overcame feelings of alienation and began interacting with other students — were more likely to persist than estranged students, or students who were unable to overcome feelings of alienation from their peers. Campbell (2007) found that NA/AN students who participated in developmental reading and writing classes that included readings that addressed their cultures experienced improved reading comprehension and program completion (Campbell, 2007). In this same vein, Anagnopoulos (2006) found that Native American college students who assisted faculty members by conducting research among their communities experienced high persistence and graduation rates.

Family support was also found to be a significant predictor of persistence for Native American college students (Guillory & Wolverton, 2008; Heavyrunner & DeCelles, 2002). Guillory & Wolverton (2008) found family support to be the single-most significant predictor of persistence, followed by the ability that earning a degree gave them to “give back” to their tribal communities and support from faculty members and peers. Heavyrunner & DeCelles (2002) concluded that the more colleges encourage and invite Native American students’ families’ involvement in their college experience, the more likely they will be to persist at the institution. Therefore, a case can be made for exploring the predictors of the intent to persist for Native American community college students.

Student Engagement

Now, more than ever, community colleges leaders must address accountability standards established by a variety of external entities, including governing boards, state and federal governments, and accrediting agencies (CCSSE, 2010a). A key factor of these expectations is the assessment of retention rates and students’ learning, both of which are directly correlated to student engagement (Pascarella, et al., 2003, 2004; CCSSE, 2010c; Tinto, 1993). Specifically, the more engaged students are with other students, college employees, and course material, the more they will gain from the college experience, which will increase their likelihood to persist in college and pursue advanced degrees (Pascarella & Terenzini, 1991; CCSSE, 2010a). According to Chickering and Gamson (1987), a good practice in undergraduate education is to encourage student-faculty communication. Tinto (1993) echoes this and states that the more frequently students interact with other faculty members and other students regarding academic issues, especially outside of class, the more likely they will be to comprehend course material. Consequently, it is imperative that community college leaders make efforts to increase student

engagement, as this will increase students' intent to persist, and, ultimately, their persistence in college (Cabrera et al., 1993). The next section will address the relationship between students' intent to persist in college and their persistence.

Relationship between Students' Intent to Persist and Persistence

Several researchers have examined the factors that contribute to students' intent to persist, which bears relevance to this study due to the correlation between students' intent to persist and actual persistence (Braxton et al., 2000; Cabrera et al., 1993; Sandler, 2000; Summers, 2003). According to Henry and Smith (1994), community college students' intent to persist is based on three components: academic variables, academic outcomes, and psychological outcomes. The academic variables include advising, attendance, course availability, major certainty, and study habits. The psychological outcomes are goal commitment, satisfaction, stress, and utility, while the academic outcome is grade point average (GPA). According to the model established by Henry and Smith (1994), once the student achieves these outcomes, his or her intent to persist will lead to goal attainment. However, students with low scores in both areas are likely to dropout. The researchers also note, however, that students who score high in one outcome but lower than another could still have a high intent to persist. In this same vein, Shin (2003) concluded that students who feel a connectedness with their peers experience high levels of satisfaction and, consequently, express the intent to persist in college. Similarly, Salinas and Llanes (2003) posited that a characteristic of students who experience difficulty adjusting to college life is the lack of intent to persist.

Shin and Chan (2004) found a strong relationship between students' connection to the college, satisfaction, and intent to persist, and Porter and Swing (2006) found a relationship between the content of first-year seminars and students' intent to persist. In addition, Braxton

found that using active learning in the classroom increases student engagement, which promotes academic and social integration and, ultimately, student persistence. Similarly, first-year college students who feel a sense of belonging at the higher education institution they attend are more likely to persist than those who do not (Hoffman, Richmond, Morrow, & Salomone, 2002). Tinto (1975) also found that a student's commitment to the goal of completing college is an influential factor in persistence. Conversely, Sandler (2000) found that institutional commitment and academic integration negatively contributed to college students' intent to persist, whereas household income contributed significantly to their intention to remain enrolled in the institution. Furthermore, Sandler (2000) concluded that students' intent to persist was more directly related to persistence than all other variables. Bean and Metzner's (1985) Student Attrition Model also explored academic, financial, and social factors and their relationship to student persistence (Cabrera et al., 1993; Hoyt, 1999; Sorey & Duggan, 2008; Summers, 2003). The Model is based on the tenet that a student's decision to withdraw from an institution is based on the following factors: (a) background and defining variables, including academic performance in high school and current educational goals; (b) intent to leave; (c) GPA; and (d) environmental variables (Bean & Metzner, 1985; Summers, 2003). Like Astin (1975, 1993), Bean and Metzner's (1985) study found that residing on campus is critical to students' academic and social integration into college life, and students' propensity to adjust to the college environment is directly related to their academic achievement and persistence (Cabrera et al., 1993). Guarino and Hocevar (2005) posited that students with an internal locus of control — or, whose efforts were focused within the college — are more likely to persist in college than students whose efforts are primarily focused outside of the college environment.

Bean continued his research with Eaton in 2002, and found that students' intent to persist in college is directly related to their degree of "institutional fit" and, ultimately, persistence at the institution. Nora and Cabrera (1993) found that students' who demonstrated commitment to the institution in which they were enrolled were more likely to express intent to persist and to persist at the institution than those who did not. Cabrera et al. (1993) measured students' intent to persist and found that it correlated directly to persistence, as students who indicated that they intended to reenroll in the institution the following semester did so.

Hausmann, Schofield, and Woods (2007) found that first-year students who felt a sense of belonging indicated a greater intent to persist than those who did not. Nora (2004) also concluded that students who expressed the intention to re-enroll felt accepted at the institution, had strong family support, and their academic interests were offered at their college of choice. Higher education personnel who match students' interests with academic offerings will help to increase students' satisfaction and persistence. The results of these studies demonstrate the importance for researchers to further investigate the factors that impact college students' intent to persist, as this will increase student persistence and, therefore, increase the number of college students who graduate and, ultimately, decrease the number who withdraw (Braxton et al., 2000; Cabrera et al., 1993; Sandler, 2000; Summers, 2003).

Current Study: Community Colleges, Native Americans, and Intent to Persist

This chapter presented a review of the literature related to Native American community college students, comprising five sections. The first section of the chapter addressed community colleges, including the mission and purpose, program and demographics, and underrepresented populations. The general findings in this section were that, while community colleges serve 44% of all undergraduate students, 52% of all Native American students, and approximately half of all

undergraduate students within each ethnic group, the probability that students from these ethnic groups will persist in college is often low (American Association of Community Colleges, 2009; DeVoe & Darling-Churchill, 2008; Palmer et al., 2009; Solís, 1995; Yazedijan et al., 2009).

The second section explored Native Americans in higher education, including the background and current environment. The section began by addressing the assimilation of European-American culture into Native-American instruction, as well as the eventual physical relocating of Native Americans to American boarding schools (Beck, 1995; Hoxie, 1984; Marr, 2009; Remini, 1988). Unfortunately, as a result of this effort, less than one-fifth of Native Americans enrolled in federal schools attended college (Beck, 1995). Fortunately, the number of NA/AN students who have earned an associate or advanced degree has increased by more than 200% in the past 32 years, and 55% of Native Americans pursuing undergraduate degrees are doing so at community colleges (American Association of Community Colleges, 2009; DeVoe & Darling-Churchill, 2008). Despite the growing number of Native American students pursuing higher education, limited research examines the factors that are related to their persistence in college, with even less specifically addressing their persistence at the community-college level (Campbell, 2007; Guillory & Wolverton, 2008; Huffman, 2001).

The third section reviewed higher education literature that focused on persistence and college success. The majority of the researchers found the more students are academically and socially involved in college life, the more likely they will be to persist in college (Pascarella et al., 2003, 2004; Tinto, 1975, 1993). Participation in extracurricular activities was also found to be positively correlated to the persistence of college students, while family support was found to be the single-most significant predictor of persistence for Native American college students (Furr & Elling, 2002; Guillory & Wolverton, 2008; Heavyrunner & DeCelles, 2002; Leppel, 2005;

Mannan, 2001; Murray & Hall, 2001; Woosley, 2003). This section also addressed community colleges' increased focus on accountability standards regarding student engagement (CCSSE, 2010c).

The fourth section of this chapter examined the relationship between college students' intention to persist in college and persistence. In summary, the majority of researchers concluded that students who indicated an intent to remain enrolled in college exhibited higher persistence rates than students who did not (Braxton et al., 2000; Cabrera et al., 1993; Henry & Smith, 1994; Porter & Swing, 2006; Sandler, 2000; Shin, 2003; Summers, 2003). Sandler (2000) found that institutional commitment and academic integration negatively contributed to college students' intent to persist, whereas household income contributed significantly to their intention to remain enrolled in the institution. This was contrary to the majority of findings from other researchers, which found a correlation between one or both of these variables and students' intent to persist and/or persistence (Bean & Metzner, 1985; Braxton et al., 2000; Cabrera et al., 1993; Henry & Smith, 1994; Porter & Swing, 2006; Shin, 2003; Summers, 2003). The number of Native American students earning degrees has increased significantly in the past 25 years (DeVoe & Darling-Churchill, 2008). Despite this improvement, this population is still second to African American students in the lowest number of associate degrees earned and received the lowest number of associate and bachelor's degrees when compared to all other ethnic groups. This review of the literature provided a background for this study, for which the research questions and hypotheses follow.

Research Questions and Hypotheses

To contribute to the literature regarding Native American community college students' intent to persist, this ex post facto study addressed the following research questions and hypotheses:

1. *What factors are related to the intent to persist for Native American community college students?* This question explored the factors of student engagement as identified in CCSSE's survey instrument, *The Community College Student Report* (CCSSE, 2010b). These factors are segmented into the following categories: (a) academic challenge, (b) active and collaborative learning, (c) student effort, (d) student-faculty interaction, and (e) support for learners. The first hypothesis that guided this study predicted the following: *The following factors are hypothesized to relate significantly to Native American students' adjustment: (a) academic challenge, (b) active and collaborative learning, (c) student effort, (d) student-faculty interaction, and (e) support for learners.*
2. *What is the relationship between Native American community college students' participation in extracurricular activities and their intent to persist?* This question explored the extent to which Native American community college students' participated in extracurricular activities as identified in CCSSE's *The Community College Student Report*. To answer this question, the researcher examined the relationship between the number of hours per week in which the respondents participate in extracurricular activities (ranging from 0 to more than 30 hours) and their intent to remain enrolled at the institutions which they are currently attending. The second hypothesis that guided this study predicts the following: *The number of hours in which Native American community college students participate in extracurricular activities relates to their intent to persist.*

Conclusion

In summary, the review of the literature suggests that the extant literature about the predictors that are related to Native American community college students' intent to persist and persistence is extremely limited. Moreover, the literature addressing Native American

community college students' participation in extracurricular activities and persistence is also sparse. Given that 52% of Native American college students attend community colleges, coupled with the increased accountability standards to which community colleges must adhere, it is imperative now more than ever that personnel implement procedures to increase students' persistence (American Association of Community Colleges, 2009; The Center for Community College Engagement, 2010c). It is critical that additional research is conducted in this area in order to provide community college leaders with accurate data to assess when developing persistence strategies. Therefore, the purpose of this study was to examine the predictors of the intent to persist for Native American community college students and to explore the relationship between their participation in extracurricular activities and intent to persist. The next chapter provides the research methodology for the study.

Chapter 3

Method

To examine the factors that are related to Native American community college students' intent to persist, the researcher conducted an ex post facto study. The researcher examined the data from CCSSE's 2010 *The Community College Student Report* by compiling Native American students' responses in five categories ranging from student engagement to external support. To determine the relationship between the categories and students' intent to persist, the responses were correlated with the item addressing their intent to remain enrolled at the institutions which they were currently attending. The researcher explored the differences and/or similarities between the factors impacting Native American students' intent to persist by segmenting them and comparing their results. This study explored which academic and extracurricular factors are predictors of Native American community college students' intent to persist in college.

Research Design

The researcher used a quantitative research design for this study. In a quantitative study, researchers quantify the degree or variation in a situation (Kumar, 2005). An ex post facto approach was used, whereby pre-existing data was analyzed and compared (Cohen, Manion, & Morrison, 2000). The ex post facto approach was appropriate for the study because it allowed the researcher to investigate a large sample size representing 658 community colleges across the United States, in Canada (British Columbia, Nova Scotia and Ontario) and the Marshall Islands, without collecting the data, as the researcher lacked the resources to do so (Cohen, Manion, & Morrison, 2000; Kumar, 2005; CCCSE, 2010b). Through use of this approach, the researcher was able to retroactively explore the possible relationships between the independent variable, or students' engagement in academic and extracurricular activities, and the dependent variable, or

students' intent to remain enrolled at the institutions which they were currently attending (Cohen, Manion, & Morrison, 2000). The researcher obtained the data for the study from CCSSE, which provided Native American survey respondents' answers to the survey items in CCSSE's 2010 *The Community College Student Report*.

Research Questions and Hypotheses

This ex post facto study examined the factors that predict Native American community college students' intent to persist in college. The following research questions framed this study:

1. *What factors are related to the intent to persist for Native American community college students?*
2. *What is the relationship between Native American community college students' participation in extracurricular activities and their intent to persist?*

Given that there is a significant lack of literature that explores the factors related to Native American community college students' intent to persist, community college administrators will be able to use this vital information to develop and implement strategies targeted toward this population. Similarly, because the literature investigating the relationship between Native American community college students' participation in extracurricular activities and their intent to persist is also sparse, this information will prove beneficial to community colleges as they seek to develop strategies to help improve the persistence rates of this population. This is especially crucial because researchers have concluded that students' intention to remain enrolled in the academic institution they are currently attending is directly related to their actual persistence in college (Braxton et al., 2000; Cabrera et al., 1993; Sandler, 2000; Summers, 2003).

This study tested the following hypotheses:

Hypothesis 1: The following factors are hypothesized to relate significantly to Native American students' adjustment: (a) academic challenge, (b) active and collaborative learning, (c) student effort, (d) student-faculty interaction, and (e) support for learners.

Hypothesis 2: The number of hours in which Native American community college students participate in extracurricular activities relates to their intent to persist.

Participants

The researcher used the results from CCSSE's 2010 *The Community College Student Report*, which are publicly available via CCSSE's Web site, for the study (CCSSE, 2010a). *The Community College Student Report* is administered by CCSSE to students enrolled in credit courses at community colleges (CCSSE, 2010d). CCSSE determines the number of students who should be surveyed by ascertaining the total sample size needed to both reduce potential sampling error and ensure validity. Depending on the size of the institution, the sample sizes range from 600 to 1,200 students. CCSSE determines the sample size for institutions that have less than 1,500 students, by calculating 20% of the total credit enrollment. In some instances, CCSSE may grant institutions permission to increase their sample size to support specific areas on which community college administrators would like to focus in order to assess certain demographic characteristics or academic areas.

The researcher requested that CCSSE provide survey responses from participants who indicated that their ethnicity is "Native American or other Native American." The respondents are 403,428 community college students representing 658 community colleges in 47 states, British Columbia, the Marshall Islands, Nova Scotia and Ontario (CCCSE, 2010b). The sample size is 5,401, which is 80% of the Native American students who completed the survey, as

CCCSE provides a random sample of the requested target population for research purposes (M. Bohlig, personal communication, September 19, 2011).

Data Collection and Measures

The independent variable was generally defined as students' engagement in academic and extracurricular activities. The dependent variable was students' intent to remain enrolled at the institutions which they are currently attending. CCSSE provided the researcher with the data in a Microsoft Excel file.

The survey instrument demonstrates construct validity, or the extent to which the survey items measure constructs based on theory, as each question is based on research conducted by scholars in the field (Creswell, 2003; CCSSE, 2010e). The instrument demonstrates content validity, or whether the survey items accurately measure the intended content, as the items were categorized into the following educational benchmarks: (a) academic challenge, (b) active and collaborative learning, (c) student effort, (d) student-faculty interaction, and (e) support for learners (CCSSE, 2010a). These items included questions regarding whether respondents participate in extracurricular activities and whether they intend to return to the institution. In addition, the aforementioned procedure that the researcher followed to score and segment the data also demonstrated content validity because it included all five benchmarks.

The CCSSE's 2010 *The Community College Student Report* was used for the study. The 38-question survey measures five educational benchmarks related to student engagement and includes responses from students at 658 community colleges from 47 states, British Columbia, the Marshall Islands, Nova Scotia, and Ontario (CCSSE, 2010c). The CCSSE liaison is a CCSSE employee who explains the survey administration process to the campus coordinator, who is selected by the college's president and serves as the contact between the liaison and the

institution (CCSSE, 2010d). The campus coordinator selects the survey administrator, who schedules the times for the surveys to be distributed and administers and collects them. The survey administrator is required to read the same script to each class before administering the surveys, and, should any issues arise, he or she must contact the survey administrator. If necessary, the college president may select more than one survey administrators.

The demographic terminology used in the study was taken from CCSSE's 2010 *The Community College Student Report*. The data excluded identifying information in the form of names, region and institution attended. Therefore, the identity of all subjects is anonymous, and responses were reported as aggregate data. The data was stored in a password-protected external hard drive and deleted upon completion of the study.

Data Analysis

The researcher used SPSS to analyze the data. Following is information about the statistical analyses for the study.

Research Question One: *What factors are related to the intent to persist for Native American community college students?* To answer this research question, the researcher segmented the survey responses into scales, including (a) academic challenge, (b) active and collaborative learning, (c) student effort, (d) student-faculty interaction, and (e) support for learners (CCSSE, 2010a). Next, the researcher calculated Cronbach's alpha to determine the scales' reliability. The researcher conducted a multiple regression to determine which scales account for the variance in students' intent to persist. The results from this analysis provided the researcher with the information necessary to prove or disprove H₁ *The following factors are hypothesized to relate significantly to Native*

American students' adjustment: (a) academic challenge, (b) active and collaborative learning, (c) student effort, (d) student-faculty interaction, and (e) support for learners.

Research Question Two: *What is the relationship between Native American community college students' participation in extracurricular activities and their intent to persist?* To answer this question, the researcher used the survey responses addressing participation in extracurricular activities and conduct a multiple regression to determine if the survey responses account for the variance in students' intent to persist. Because the data was segmented into results from Native American community college students and will measure the degree to which they participate in extracurricular activities, the researcher was able to prove or disprove H₂: *The number of hours in which Native American community college students participate in extracurricular activities relates to their intent to persist.*

Selection of Items and Formation of the Scales

To answer Research Question One, the researcher segmented the survey responses into five scales that reflect the CCSSE's "national benchmarks of effective educational practice in community colleges," which are (a) academic challenge, (b) active and collaborative learning, (c) student effort, (d) student-faculty interaction, and (e) support for learners, (CCSSE, 2010a). The researcher created the scales using the same survey questions that CCCSE segmented into each of these categories. Following are the scale categories and corresponding survey items.

Academic challenge.

- During the current school year, how often have you:
Worked harder than you thought you could to meet an instructor's standards or expectations (4p)

- How much does this college emphasize:

Encouraging you to spend significant amounts of time studying (9a)

Active and collaborative learning.

During the current school year, how often have you:

Asked questions in class or contributed to class discussions (4a)

Made a class presentation (4b)

Worked with other students on projects during class (4f)

Worked with classmates outside of class to prepare class assignments (4g)

Tutored or taught other students (paid or voluntary) (4h)

Participated in a community-based project as a part of a regular course (4i)

Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.) (4r)

Student effort.

- During the current school year, how often have you:

Prepared two or more drafts of a paper or assignment before turning it in (4c)

Come to class without completing readings or assignments (4e)

Student-faculty interaction.

During the current school year, how often have you:

Used e-mail to communicate with an instructor (4k)

Discussed grades or assignments with an instructor (4l)

Talked about career plans with an instructor or advisor (4m)

Discussed ideas from your readings or classes with instructors outside of class (4n)

Received prompt feedback (written or oral) from instructors on your performance (4o)

Worked with instructors on activities other than coursework (4q)

Support for learners.

- How much does this college emphasize:

Providing the support you need to help you succeed at this college (9b)

Encouraging contact among students from different economic, social, and racial or ethnic backgrounds (9c)

Helping you cope with your nonacademic responsibilities (work, family, etc.) (9d)

Providing the support you need to thrive socially (9e)

Providing the financial support you need to afford your education (9f)

- During the current school year, how often have you:

Used academic advising/planning services (13a1)

Used career counseling services (13b1)

Following is the survey item for the dependent variable, or students' intent to remain enrolled at the institutions which they are currently attending.

- When do you plan to take classes at this college again? (20)

To answer Research Question Two, the researcher used survey responses addressing participation in extracurricular activities, or the independent variable. The researcher used the same dependent variable that was used for Research Question One. Following are the extracurricular activity survey items.

- About how many hours do you spend in a typical 7-day week doing each of the following?

Participating in college-sponsored activities (organizations, campus publications, student government, intercollegiate or intramural sports, etc.) (10c)

- Indicate how often you use the following services.

Student organizations (13i)

Ethical Protection of Participants

The researcher used pre-existing data from the 2010 *The Community College Student Report* for the study (CCSSE, 2010c). The results of the CCSSE are publicly available CCSSE's Web site. However, the researcher requested that CCSSE provide survey responses from (a) participants who indicated that their ethnicity is "Native American or other Native American." The data excluded identifying information in the form of names, region or institution attended. Thus, the identity of all subjects is anonymous, and responses were reported as aggregate data. Upon completion of the study, the data was deleted.

Limitations

The researcher did not conduct or oversee the data collection process and thus was unable to determine whether any potential threats to internal validity may have occurred (Creswell, 2003). The survey respondents self-reported demographic characteristics including ethnicity. Given the anonymity of the survey, the researcher is unable to determine whether those who indicated their ethnicity as "Native American or other Native American" accurately identified themselves as such. This issue could potentially pose a threat to external validity (Creswell, 2003). Consequently, the researcher must assume that the data was collected and recorded in an accurate and ethical manner. CCSSE's data-release policy limits the number of variables they are able to release to requestors (M. Bohlig, personal communication, October 18, 2011). As a result,

14 of the survey items that correspond with CCSSE's benchmarks were excluded from this study.

Conclusion

Although the number of Native American community college students pursuing higher education continues to increase, few researchers have explored the factors that contribute to their persistence in college, with even less addressing this critical issue at the community-college level (Campbell, 2007; Guillory & Wolverton, 2008; Huffman, 2001). Similarly, researchers have addressed the positive impact of college students' participation in extracurricular activities on persistence, but few researchers have investigated this topic among Native American college students (Furr & Elling; Leppel, 2005; Mannan, 2001; Murray & Hall, 2001; Woosley, 2003). Researchers have repeatedly concluded that students who participate in extracurricular activities are more likely to persist than those who do not (Anagnopoulos, 2006; Campbell, 2007; Furr & Elling; Huffman, 2001; Leppel, 2005; Mannan, 2001; Murray & Hall, 2001; Woosley, 2003). Therefore, by conducting additional studies examining the impact of participation in extracurricular activities on Native American students' persistence, researchers will have accurate information that will help them in tailoring persistence and retention strategies to this subgroup. For example, if the data show a relationship between one or more of the categories and Native American community college students' intent to persist, researchers may wish to modify persistence initiatives to better address this population. However, if the results do not show a relationship between these categories and Native American students' intent to persist, researchers may wish to enhance their current persistence initiatives rather than implement new strategies.

Chapter 4

Results

This chapter provides the demographic characteristics of the survey respondents and the results of the statistical analyses. The study explored (a) the factors that are related to the intent to persist for Native American community college students and (b) the relationship of Native American community college students' participation in extracurricular activities on their intent to persist and tested the following hypotheses:

Hypothesis 1: The following factors are hypothesized to relate significantly to Native American students' adjustment: (a) academic challenge, (b) active and collaborative learning, (c) student effort, (d) student-faculty interaction, and (e) support for learners.

Hypothesis 2: The number of hours in which Native American community college students participate in extracurricular activities relates to their intent to persist.

Participants

The sample used in this study is 5,401 Native American students from 658 community colleges in 47 states, British Columbia, the Marshall Islands, Nova Scotia and Ontario who took the Community College Student Report in 2008, 2009 and 2010 (CCCSE, 2010b). The sample represents a random sample of 80% of the total of Native American survey respondents (M. Bohlig, personal communication, September 19, 2011). The percentage of female survey respondents was 56.6 ($n = 3,050$), and 43.4% ($n = 2,338$) were males. Table 1 illustrates the age ranges of the participants.

Table 1

Summary of Participants' Age Ranges

Age Range	Frequency	Percentage	Cumulative
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			Percentage
18-19	1,394	26	26
20-21	1,144	21.4	47.4
22-24	760	14.2	61.6
25-29	740	13.8	75.4
30-39	689	12.9	88.3
40-49	390	7.3	95.6
50-64	203	3.8	99.4
65+	32	.6	100

While 2% of overall survey respondents were Native Americans, nationally, Native Americans comprise 1% of the Native American community college student population (CCSSE, 2010b).

The majority of participants' — or 64.5% — indicated that their primary goal for attending the college in which they were currently enrolled was to earn an associate degree, while 36.7% indicated their primary goal was to complete a certificate program. More than half (53.2%) indicated that their primary goal was to transfer to a four-year college or university, 46.9% attended to obtain or update job-related skills, and 46.8% were enrolled for self-improvement/personal enjoyment. Nearly 30% (29.5%), indicated that their primary reason for attending the college was due to a desire to change careers. The limitations section of chapter 5 will address the percentages and response values associated with this survey question.

Research Questions and Hypotheses

Research Question 1

What factors are related to the intent to persist for Native American community college

students?

Hypothesis 1: The following factors are hypothesized to relate significantly to Native American students' adjustment: (a) academic challenge, (b) active and collaborative learning, (c) student effort, (d) student-faculty interaction, and (e) support for learners.

The researcher calculated Cronbach's alpha for each of the five scales and established reliability for the following: (a) active and collaborative learning, (b) student-faculty interaction, and (c) support for learners. Table 2 shows the Cronbach's alpha coefficient for the five scale categories.

Table 2

Cronbach's Alpha Coefficient for the Scale Categories

Scale Category	Cronbach's Alpha Coefficient
Academic challenge	.42
Active and collaborative learning	.68
Student effort	.09
Student-faculty interaction	.74
Support for learners	.80

According to Nunnally (1978), .70 is an acceptable reliability coefficient; however, lower thresholds have been used in studies. Because the scales student-faculty interaction and support for learners were above .70, the researcher determined them reliable. Because the Cronbach's alpha for active and collaborative learning was only .02 from the threshold of .70, the researcher also selected it for further analysis.

Next, the researcher conducted a multiple regression to predict students' intent to persist and included the measures active and collaborative learning, student-faculty interaction and support for learners. The regression equation was significant, $R^2 = .01$, adjusted $R^2 = .01$, $F(3, 4,638) = 17.49$, $p < .01$. However, the correlation coefficient and adjusted R^2 shows that only 1% of the variance of students' intent to persist can be predicted by the combination of active and collaborative learning, student and faculty interaction and support for learners. Both student-faculty interaction and support for learners displayed significance at $p < .001$. At .091, active and collaborative learning did not display significance, $p > .05$. Student-faculty interaction was most strongly related to students' intent to persist. Supporting this conclusion is the strength of the bivariate correlation between the student-faculty interaction measure and students' intent to persist, which was $-.06$, $p < .01$, as well as the comparable correlation partialling out the effects of the other measures, $-.02$, $p < .01$. Table 3 shows the bivariate and partial correlations of each measure to students' intent to persist.

Table 3

Bivariate and Partial Correlations of the Predictors to Students' Intent to Persist

Predictors	Correlation between each predictor and intent to persist	Correlation between each predictor and intent to persist, controlling for all other predictors
Active and collaborative learning	-.09	-.07
Student-faculty interaction	-.06,	-.02
Support for learners	.01	.05

Research Question 2

What is the relationship between Native American community college students' participation in extracurricular activities and their intent to persist?

Hypothesis 2: The number of hours in which Native American community college students participate in extracurricular activities relates to their intent to persist.

The researcher conducted a multiple regression to predict students' intent to persist and included (a) the frequency at which students participated in student organizations (survey response values included "Don't Know/N/A," "Rarely/never," "Sometimes," and "Often) and (b) the number of hours students participated in extracurricular activities including student organizations, campus publications and intercollegiate or intramural sports (survey response values ranged from zero through more than 30 hours per week). The regression equation was significant, $R^2 = .00$, adjusted $R^2 = .00$, $F(2, 5,038) = 14.06$, $p < .01$. The correlation coefficient and adjusted R^2 showed that less than 1% of the variance of students' intent to persist can be predicted by the combination of these factors. However, at .00, both predictors — the frequency at which students participated in student organizations and the number of hours in which students' participated in extracurricular activities — displayed significance, $p < .01$. The number of hours in which students participated in student organizations was most strongly related to students' intent to persist. Supporting this conclusion is the strength of the bivariate correlation between the number of hours in which students participated in student organizations and students' intent to persist, which was $-.06$, $p < .01$, as well as the comparable correlation partialling out the effect of the other measure, $-.04$, $p < .01$. The bivariate correlation of the measure of the frequency at which students' participated in student organizations was $-.05$, $p <$

.01, and the comparable correlation partialling out the effect of the number of hours in which students participated in extracurricular activities was $-.03$, $p < .01$.

Conclusion

This chapter presented an analysis of the data and findings. For the first research question, only three of the benchmark/scale categories passed the initial reliability test, or Cronbach's alpha; thus, those predictors were included in the subsequent multiple regression analysis. Active and collaborative learning – which CCSSE (2010a) defines as the extent to which participants were actively involved in their education and were provided with opportunities to apply what they learned in different settings – did not demonstrate a statistically significant relationship between students' intent to persist. Student-faculty interaction – or the degree to which students had personal interactions with faculty members – was statistically significant and was most strongly correlated with students' intent to persist. Support for learners – or the prevalence of student-support services such as academic and career planning and financial aid – also demonstrated statistical significance. While the regression equation demonstrated significance because the adjusted R^2 accounted for 1% of the variance of students' intent to persist, the model does not prove to be robust. The research suggests that all of these factors positively impact students' decisions to remain enrolled at their current institutions.

Both predictor measures for Research Question 2 demonstrated statistical significance, with the number of hours in which students participated in student organizations being most strongly related to students' intent to persist. The adjusted R^2 showed that the combination of both predictors accounted for less than 1% of the variance of students' intent to persist. Therefore, the model and data set are not strong. The results of the analysis align with previous research that explored the relationship between college students' participation in extracurricular

activities with intent to persist. The next chapter will further discuss these findings, including their implications for practice, as well as the limitations of the study and the recommendations for further research.

Chapter 5

Discussion

The purpose of this study was to examine (a) the factors that are related to the intent to persist for Native American community college students based on five core benchmarks established by CCSSE and (b) the relationship of Native American community college students' participation in extracurricular activities on their intent to persist and to prove or disprove the following hypotheses:

Hypothesis 1: The following factors are hypothesized to relate significantly to Native American students' adjustment: (a) academic challenge, (b) active and collaborative learning, (c) student effort, (d) student-faculty interaction, and (e) support for learners.

Hypothesis 2: The number of hours in which Native American community college students participate in extracurricular activities relates to their intent to persist.

Through multivariate and bivariate statistics, the researcher was able to disprove Hypothesis 1 and was able to prove Hypothesis 2. This chapter provides a summary and interpretation of the findings, the limitations encountered by the researcher, and recommendations for further research.

The results of this study could help community colleges develop and/or update persistence and retention strategies that are tailored to Native American student populations. This study may also provide community colleges with the information they need to increase the number of extracurricular activities offered — which could include the creation of student organizations for Native American students — and to market these enhancements and program additions to current and potential Native American students. The results of this study could provide CCSSE with critical information regarding its benchmarks and their relationship to

Native American community college students' intent to persist. Some of the conclusions may also help four-year higher education institutions and tribal colleges with their retention and persistence programs.

Major Findings

The results of this study reveal the relationship between CCSSE's (2010a) benchmarks of effective educational practice and Native American community college students' intention to remain enrolled at the academic institutions they were attending. The benchmarks are focused on institutional practices and student behaviors that foster student engagement and are positively correlated with student persistence (CCSSE, 2010a). The five national benchmarks are academic challenge, active and collaborative learning, student effort, student-faculty interaction and support for learners. This study also illustrates the positive correlation between students' participation in extracurricular activities and their intent to persist.

The participants included a representative random sample of 5,401 Native American students from 658 community colleges in 47 states, British Columbia, the Marshall Islands, Nova Scotia and Ontario — 56.6% of whom were female and 43.4% who were males. These percentages are similar to the percentages of the 2010 CCSSE cohort who completed the survey: 58% females and 42% males, which mirror the gender demographics of community college students on a national scale (American Association of Community Colleges, 2009; CCCSE, 2010b). The majority of participants were ages 18 to 19 ($n = 1,394$) and 20 to 21 ($n = 1,144$). These figures mirror the demographics of community college students in terms of age, as students 21 or younger are represented as 47% in each. The second-highest age group of community college students is the 22 to 39 age group, which represents 40% nationally and 40.9% of the study's participants – a difference of only .9%.

Nearly 65% of participants indicated that their primary reason for attending the college was to earn an associate degree ($n = 3,413$), while more than half enrolled with a goal of transferring to a four-year college or university ($n = 2,806$). Approximately 37% indicated their primary goal was to complete a certificate program ($n = 1,939$). While the relationship these factors have on students' intent to persist was not analyzed in this study, this information may prove useful to the scope of the study as well as future research. This will be explained in depth in the Limitations section.

Hypothesis 1

The results of this study do not support Hypothesis 1 in its entirety. The academic challenge and student effort scales did not pass the reliability test, or Cronbach's alpha; as a result, the researcher excluded them from the multiple regression analyses. The active and collaborative learning scale did not demonstrate statistical significance. However, the student-faculty interaction and support for learners scales were statistically significant, which suggests that there are identifiable predictors of the intention to persist for Native American community college students.

The active and collaborative learning benchmark and scale included survey items that addressed whether participants (a) collaborated with other students on assignments and projects outside of class, (b) delivered class presentations, (c) worked as an academic tutor, (d) assisted with a community-based project and/or (e) asked questions in class or contributed to class discussions (CCSSE, 2010a). The statistical insignificance of this benchmark is in counter to Mannan's (2001) Tinto's (1975, 1993) and Wilcox's (2005) findings that college students who are engaged in the college academically demonstrate a greater likelihood to persist in college than students who are not. The results also contradict Anagnopoulos' (2006) findings that Native

American college students who collaborated with faculty members to conduct research in their communities experienced high persistence and graduation rates. The lack of statistical significance of the active and collaborative benchmark, does however, lend credence to Borglum and Kubala's (2000)'s study, which did not find a relationship between academic and social integration and persistence among community college students. (It is important to note that, in Borglum and Kubala's (2000) study, the majority of students did not interact with instructors outside of the allotted class time.)

The survey items included in the student-faculty interaction scale and benchmark addressed how often participants (a) emailed an instructor, (b) discussed assignments and/or grades with an instructor, (c) discussed career plans with an advisor/instructor, (d) received feedback from instructors, and (e) worked with instructors on activities besides coursework (CCSSE, 2010a). The positive correlation between the student-faculty interaction benchmark and participants' institutional adjustment and intent to persist is supported by the research of Mannan (2001), Pascarella et al. (2003, 2004), Tinto (1975, 1993) and Wilcox et al. (2005). Borglum and Kubala's (2000) study, however, refutes this finding.

Research has repeatedly shown that community college students benefit from the use of academic and career-planning services (CCSSE, 2010a). To this end, the support for learners benchmark and scale included survey items focused on the extent to which the college (a) provided students with the support they needed to succeed, (b) encouraged students to interact with students from economic, social, racial and/or ethnic backgrounds other than their own, (c) helped students cope with responsibilities outside academics — such as work and family, (d) provided students with the support they need to “thrive socially,” and (e) offered financial support to students to assist them with affording their education. Additionally, this benchmark

addressed how often students used academic advising/planning and career counseling services. The researcher found the support for learning variable to be statistically significant, thus supporting the conclusions made by previous studies which positively associated the prevalence and use of academic, career and financial support services with students' persistence and institutional adjustment.

Hypothesis 2

The researcher was able to prove Hypothesis 2 in this study, as the number of hours in which students participated in extracurricular activities was statistically significant to their intent to persist. In addition to the survey item that addressed the number of hours students participated in extracurricular activities (respondents could select from increments ranging from zero to more than 30 hours), the researcher also included the survey item that addressed the frequency at which students participated in student organizations (which was indicated by a survey response value ranging from "Don't Know/N/A," to "Often"), and this variable was found to be statistically significant to participants' intent to persist. Of the two items, the number of hours in which students participated in student organizations was most strongly related to students' intent to persist.

The statistical significance of Hypothesis 2 supports existing research on Native American students' participation in extracurricular activities and student persistence (Campbell, 2007; Guillory & Wolverton, 2008). Specifically, this study aligns with Campbell's (2007) research, which found that NA/AN students who participate in extracurricular activities are more likely to persist and graduate than students who do not. On a broad level, this study also aligns with research focused on the general population of college students, which concluded that students who are academically and socially engaged in college life are more likely to succeed

and persist in college (Astin, 1984; Furr & Elling, 2002; Leppel, 2005; Mannan, 2001; Murray & Hall, 2001; Tinto, 1975, 1993; Wilcox et al., 2005; Woosley, 2003). In contrast, Borglum and Kubala's (2000) study does not support Hypothesis 2.

While this study did not capture all available variables predicative of participants' intent to persist, it did present some important and applicable findings. The results of this study suggest that Native American community college students who (a) collaborated and communicated with instructors (b) used academic advising/planning and career counseling services, and (c) participated in extracurricular activities and student organizations were more likely to persist than students who did not. The study also concluded that the academic challenge and student effort scales were not a reliable measurement to use against students' intent to persist. While active and collaborative learning did demonstrate reliability, it was found not to be a predictor of participants' intent to persist in college. The creation of more robust and reliable models comprising potential predictors of Native American community college students' intent to persist could help decrease the gaps found in this study.

Implications for Practice

Community College Admissions, Student Life, and Student Support Offices; Academic Advisors and Instructors

The findings of this study have several implications for community college personnel. It is critical that employees who work in admissions offices are aware of the results of this study so they can incorporate this information into their recruitment materials, strategies, and plans. For example, a detailed list of the academic advising, career counseling and student organizations offered could be included in information packets that are mailed and distributed to prospective students. If space allows, photos of students utilizing these facilities and programs should also be

included, along with descriptions and contact information. These materials should also highlight collaborative student-faculty opportunities inside and outside of the classroom. Student support services and student life offices should also display this information in their offices and distribute it to current and potential students who inquire about these services. This information should also be communicated to current students through a series of vehicles, such as emails, on the college website and in printed materials. Admissions personnel should also communicate the academic, career and extracurricular offerings to current and potential students verbally during one-on-one meetings with students, during college tours, and at college fairs.

For community colleges that currently lack student organizations geared toward Native American students, student life personnel should collaborate with admissions to discuss the feasibility of establishing such organization(s). It would also prove beneficial to arrange a meeting with a community college or four-year educational institution that currently has a Native American student association (or related organization) to discuss items that should be considered during the brainstorming, implementation and establishment phases. If, as a result of these meetings, community college student life personnel decide to establish an organization for Native American students, this partnership could further flourish by holding events for students who are members of the organizations at both colleges. Community colleges should strive to partner with four-year colleges and universities who currently have student organizations so that they can alternate hosting these events. With 53.2% of participants indicating that their primary goal for attending the community college in which they were currently enrolled was to transfer to a four-year college or university, four-year institutions would benefit from hosting events, because it would expose a population of potential new enrollees to the institutions. Four-year

colleges/universities could use these events as a vehicle through which they informed students not only about their Native American student organizations, but about the institution as a whole.

The results of this study are also extremely useful to community college academic advisors. Because the use of academic resources and extracurricular activities were positively correlated to students intent to remain enrolled, academic advisors should inform Native American students about the academic resources and extracurricular activities available. They should also contact instructors and department deans regarding classes which involve student-faculty interaction so that they can then recommend these classes, as applicable, to their advisees.

Community college instructors should revisit their course syllabi and structure and create and/or increase opportunities for student-faculty interaction. Instructors – especially those who teach introductory classes that are requirements for all students, regardless of major – should mention the student support and extracurricular offerings available to students and have the aforementioned printed materials highlighting this information available for distribution and/or perusal in the classroom. Instructors who have classes with Native American students should state the name and location of any Native American student organizations. If time allows, community college instructors should arrange for student organization representatives to briefly present to the class about their programs, provide an opportunity for questions, and distribute supplemental materials about their organizations during these sessions.

Four-Year Colleges and Universities

There are many potential implications of this study to two- and four-year colleges and universities. Earlier in this chapter, the importance of community college Native American student organizations partnering with Native American student organizations from four-year

educational institutions was addressed. More than half of Native American community college students indicated that their reason for enrolling in community college was to ultimately, transfer to a four-year college or university so that they could earn their bachelor's degree. While the participants in this study were Native American community college students, the assumption can be made that participants who are interested in transferring to a four-year college or university would find the prevalence of student services and extracurricular offerings to be a deciding factor in their selection of a transfer institution. Therefore, it is critical that personnel at four-year institutions are aware of the factors in this study that positively correlate to Native American community college students' intent to persist in college so that they can enhance their recruitment materials with these offerings and also verbally communicate this information to potential students during in-person meetings, phone meetings and/or inquiries, presentations to potential students, and at college fairs.

Center for Community College Student Engagement

CCCSE posts dissertations on topics related to student engagement on its website (CCCSE, 2011). In addition to topics directly addressing student engagement, some of the topics of those that are currently posted address academic achievement, retention, and intercultural competence. Because this study utilized a data set from CCCSE and focuses on Native American students' engagement, retention and intent to persist, it could be added to the 13 dissertations currently posted on the website, thereby providing community college personnel with valuable information about this demographic. (There are currently no other dissertations posted focused on Native American students.) CCCSE might also benefit from this study by examining the benchmark scales and revising the survey items to create stronger statistical models – which may include increasing the number of survey response items that researchers can request.

Limitations of the Study and Recommendations for Further Research

Limitations

This study relied on data provided by CCCSE, and, while the data set is assumed to be accurate and complete, the researcher did not oversee the recording, compilation, and extraction of the data and, thus, cannot guarantee its accuracy. Survey respondents who indicated that they were Native American self-reported this information, so CCCSE and the researcher are assuming that participants responded truthfully to this survey item.

While this study addressed students' intention for enrolling in the institution, participants were able to select "Primary Goal" for more than one option – and could even have selected it for every option. This discrepancy resulted in percentages that exceeded 100%. For example, nearly 65% of participants responded that their primary goal was to earn an associate degree, while approximately 37% enrolled to complete a certificate program. Adding to that the percentage who indicated their primary goal was to transfer for a four-year college or university (53.2%), and the cumulative percentage is already 155% without accounting for the three other options (obtain or update job-related skills, self-improvement/personal enjoyment, and to obtain skills and knowledge required to change careers). To help avoid potentially skewed results for this survey question in the future, the researcher recommends that the survey be amended so that respondents may only select "Primary Goal" for one item, as this will result in more accurate reporting and application of the data by community college personnel who are using the data to help improve their retention and /or persistence strategies for Native American students.

Because CCSSE's data-release policy limits the number of variables they are able to release to requestors, the following survey items were excluded from this study (M. Bohlig, personal communication, October 18, 2011):

Academic challenge.

- How much does your coursework at this college emphasize:

Analyzing the basic elements of an idea, experience, or theory (5b)

Synthesizing and organizing ideas, information, or experiences in new ways (5c)

Making judgments about the value or soundness of information, arguments, or methods (5d)

Applying theories or concepts to practical problems or in new situations (5e)

Using information you have read or heard to perform a new skill (5f)

- During the current school year:

How many assigned textbooks, manuals, books, or book-length packs of course readings did you read (6a)

How many papers or reports of any length did you write (6c)

To what extent have your examinations challenged you to do your best work (7)

Student effort.

- During the current school year, how often have you:

Worked on a paper or project that required integrating ideas or information from various sources (4d)

Used peer or other tutoring services (13d1)

Used skill labs (13e1)

Used a computer lab (13h1)

- During the current school year:

How many books did you read on your own (not assigned) for personal enjoyment or academic enrichment (6b)

- How many hours did you spend in a typical week preparing for class (studying, reading, writing, rehearsing, or other activities related to your program) (10a)

Both the academic challenge and student effort scales did not pass the reliability test, and, as a result, the researcher excluded them from further analyses. These were the same benchmarks that included survey responses that were missing from the dataset due to CCSSE's data-release policy, and, while this could be a coincidence, it is also possible that the exclusion of these survey items contributed to the reliability coefficients lacking reliability.

A considerable limitation to this study was the presence of statistical significance without any applied significance. The scales that were used for Research Question 1 and Research Question 2 were shown to be weak, with the variables contributing very little to students' intent to persist. However, four of the variables demonstrated statistical significance due to the large number of participants ($n = 5,401$). As a result, these models should not be used as predictors in future studies. The Recommendations for Further Research section will include suggestions for the inclusion of other variables as possible predictors in future studies.

Recommendations for Further Research

Several recommendations could be made for further research. According to Astin's (1984) Theory of Involvement, part-time students are less likely to persist than students who are enrolled full-time. Further research could include students' enrollment status as a predictor in future studies.

Tinto (1975) found that the higher students' GPA, the more likely they are to remain enrolled in college. Additionally, males were found to be more likely to complete academic degree programs than female students. The inclusion of participants' gender and GPA as predictors could prove valuable to future studies.

To gain additional insight into the relationship of external variables and student's intent to persist, additional survey items that could be included in future research follows:

- How likely is it that the following issues would cause you to withdraw from class or from this college?

Working full-time (14a)

Caring for dependents (14b)

Academically unprepared (14c)

Lack of finances (14d)

Transfer to a 4-year college or university (14e)

- How supportive are your friends of your attending this college? (15)
- How supportive is your immediate family of your attending this college? (16)

Because item 14 and, consequently, participants' responses to this question directly address students' intent to persist, the researcher recommends this item as a predictor in future studies. Previous research found that maintaining strong relationships with family members results in a support network as students adjust to college (Heavyrunner & DeCelles, 2002; Nora, 2002). To this end, the researcher recommends the use of survey questions 15 and 16 as predictors of students' intent to persist in future research.

The researcher would like to recommend for consideration the addition of survey item 11b to the student-faculty interaction benchmark. This item asks respondents to evaluate the quality of their relationships with instructors. The researcher also recommends the addition of survey item 11c to the support for learners benchmark, as it requests that respondents indicate the quality of their relationships with administrative personnel and offices.

Conclusion

Community colleges educate 52% of all Native American undergraduate students, yet NA/AN students earn the second-lowest number of associate degrees and the lowest number of bachelor's degrees when compared with all other ethnic groups (American Association of Community Colleges, 2009; DeVoe & Darling-Churchill, 2008). The gap between the number of students enrolled versus those who actually graduate is too large to ignore. With the population of NA/AN residents projected to increase by 25% in the next 15 years, it is critical now, more than ever, for community colleges to examine the factors that contribute to Native American students' persistence and retention (U.S. Census Bureau, 2008). Despite this urgency, few researchers have examined the factors that influence Native American students' intent to persist in college, and, of those who have, the focus has been on four-year colleges and universities (Campbell, 2007; Guillory & Wolverton, 2008; Huffman, 2001). The present study examined (a) the factors related to Native American community college students' intent to persist, and (b) the relationship between Native American community college students' participation in extracurricular activities and their intent to persist.

A random sample comprised of 5,401 Native American students who completed the 2010 *The Community College Student Report* was used in this study. Using multiple regression, predictors were examined to determine if there a statistically significant relationship could be determined between them and participants' intent to persist. The results of the study concluded that there are identifiable predictors of the intent to persist for Native American community college students, and they are (a) student-faculty interaction, (b) support for learners, (c) the frequency at which students participated in student organizations, and (d) the number of hours students participated in extracurricular activities including student organizations, campus publications and intercollegiate or intramural sports.

These findings suggest that Native American community college students' intent to persist can be controlled by predictor variables. Given the anticipated surge of NA/AN residents (U.S. Census Bureau, 2008), it is imperative that community college personnel gain an understanding of the factors related to students' persistence and retention. The findings of this study lend support for the creation and enhancement of recruitment, retention, and persistence strategies targeted toward Native American community college students and provide a baseline for future studies.

References

- American Association of Community Colleges (2009). *Fast facts*. Retrieved August 30, 2009, from <http://www.aacc.nche.edu/AboutCC/Pages/fastfacts.aspx>
- American Indian College Fund (2009). *History and mission*. Retrieved August 28, 2009, from <http://www.collegefund.org/about/history.html>
- Astin, A.W. (1984). Student Involvement: A developmental theory for higher education. *Journal of College Student Personnel*, 25, 297-308.
- Baker, R. W., & Siryk, B. (1984). Measuring adjustment to college. *Journal of Counseling Psychology*, 31(2), 179-189.
- Baum, S., & Payea, K. (2004). *Education pays 2004: The benefits of higher education for individual and society*. New York: The College Board.
- Beck, D. R. M. (1995). Native American higher education before 1974: From colonization to self-determination. In *critical issues in Native American higher education* (pp. 16-24). Chicago: NAES College.
- Bowen, H. R. (1996). *Investment in learning: The individual and social value of American higher education*. Edison, NJ: Transaction Publishers.
- Braxton, J.M., Milem, J. F., & Sullivan, A.S. (2000). The influence of active learning on the college student departure process. *The Journal of Higher Education*, 71(5), 569-90.
- Brown, D. (2003). Tribal colleges: Playing a key role in the transition from secondary to postsecondary education for Native American students. *Journal of Native American Education*, 42(1), 36-45.
- Bryan, E., & Simmons, L.A. (2009). Family involvement: Impacts on post-secondary

- educational success for first-generation Appalachian College Students. *Journal of College Student Development*, 50(4), 391-406.
- Cabrera, A.F., Castaneda, M.B., Nora, A., & Hengstler, D. (1992). The convergence between two theories of college persistence. *Journal of Higher Education*, 63(2).
- Campbell, A. E. (2007). Retaining Native American/Alaskan Native students in higher education: A case study of one partnership between the Tohono O'odham Nation and Pima Community College in Tucson, AZ. *Journal of Native American Education*, 46(2), 19-41.
- Chickering, A.W., & Gamson, Z.F. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin*, 39(7), 3-7.
- Cohen, A. M., & Brawer, F. B. (2008). *The American community college* (5th ed.). San Francisco: Jossey-Bass.
- Cohen, L., Manion, L., & Morrison, K. (2000). *Research methods in education*. London: Routledge Falmer.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks, CA: Sage.
- DeVoe, J. F. & Darling-Churchill, K. E. (2008). *Status and trends in the education of American Indians and Alaska Natives: 2008* (NCES 2008-084). Washington, DC: U.S. Department of Education.
- Furr, S. R., & Elling, T. W. (2002). African-American students in a predominantly-white university: Factors associated with retention. *College Student Journal*, 36(2), 188-202.
- Guillory, R. M., & Wolverton, M. (2008). It's about family: Native American student persistence in higher education. *The Journal of Higher Education*, 79(1), 58-87.

- Hausmann, L.R.M., Schofield, J.W., Woods, R.L. (2007). Sense of belonging as a predictor of intentions to persist among African-American and White first-year college students. *Research in Higher Education*, 48(7), 803-839.
- Heavysrunner, I., & DeCelles, R. (2002). Family education model: Meeting the student retention challenge. *Journal of Native American Education*, 41(2), 29-37.
- Henry, T.C., & Smith, G.P. (1994). Planning student success and persistence: Implementing a state system strategy. *Community College Review*, 22, 26-36.
- Hoxie, F. (1984). *A final promise: The campaign to assimilate the Indians, 1880-1920*. Lincoln, NE: University of Nebraska Press.
- Huang, Y., & Chang, S. (2004) Academic and cocurricular involvement: Their relationship and the best combination for student growth. *Journal of College Student Development*, 45(4), 391-406.
- Huffman, T. (2001). Resistance theory and the transculturation hypothesis as explanations of college attrition and persistence among culturally traditional Native American students. *Journal of Native American Education*, 40(3), 1-23.
- Hu, S. & Wolniak, G.C. (2009, March). *Student engagement in college and early career earnings: Is there a linkage?* Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- Jackson, A. P., Smith, S. A., & Hill, C. L. (2003). *Academic persistence among Native American college students*. *Journal of College Student Development*, 44 (4), 548-565.
- Jefferies, R., Nix, M., & Singer, C. (2002). Urban Native Americans "dropping" out of traditional high schools: Barriers and bridges to success. *The High School Journal*, 85(3), 38-46.

- Laden, B.V. (1998). An organizational response to welcoming students of color. *New Directions for Community Colleges*, 102, 31-41.
- Larimore, J. A. & McClellan, G. S. (2005). Native American student retention in U.S. postsecondary education. *New Directions for Student Services*, 109, 17-32.
- Leppel, K. (2005/2006). The impact of sport and non-sport activities on college persistence of freshmen. *Journal of College Student Retention*, 7(3/4).
- Mannan, M. (2001). An assessment of the academic and social integration as perceived by the students in the university of Papua new guinea. *Higher Education*, 41, 283-298.
- Maestes, R., Vaquera, G.S., & Zehr, L. M. (2007). Factors impacting sense of belonging at a Hispanic-serving institution. *Journal of Hispanic Higher Education*, 6, 237-256.
- Marr, C. (2009). *Assimilation through education: Indian boarding schools in the northwest*. Retrieved September 18, 2009, from http://www.english.illinois.edu/maps/poets/a_f/erdrich/boarding/marr.htm
- McNamara, K.M. & Cover, J.D. (1999). An assessment of extramural activities that encourage support for the liberal arts. *College Student Journal*, 33(4), 594-608.
- McDonough, P. (2004). *The school-to-college transition: Challenges and prospects*. Washington, DC: U.S. American Council on Education.
- Nora, A. (2004). The role of habitus and cultural campaign in choosing a college, transitioning from high school to higher education, and persisting in college among minority and nonminority students. *Journal of Hispanic Higher Education*, 3, 180-208.
- Nunnally, J. (1978). *Psychometric theory*. New York: McGraw-Hill.
- Palmer, R. T., Davis, R.J., & Hilton, A.A. (2009). Exploring challenges that threaten to impede

- the academic success of academically underprepared Black males at an HBCU. *Journal of College Student Development*, 50(4), 258-467.
- Pascarella, E.T. & Terenzini, P.T. (1991). *How college affects students: Findings from twenty years of research*. San Francisco: Jossey-Bass.
- Pascarella, E.T., Wolniak, G. C., Pierson, C. T., & Terezini, P. T. (2003). Experiences and outcomes of first-generation students in community colleges. *Journal of College Student Development*, 44(3), 420-429.
- Pascarella, E.T., Wolniak, G. C., Pierson, C. T., & Terezini, P. T. (2004). First-generation college students: Additional evidence on college student experiences. *The Journal of Higher Education*, 75(3), 249-284.
- Porter, S.R., & Swing, R.L. (2006). Understanding how first-year seminars affect persistence. *Research in Higher Education*, 47(1), 89-109.
- Remini, R. (1988). *The Life of Andrew Jackson*. NY: Harper & Row.
- Salinas, A., & Llanes, J. R. (2003). Student attrition, retention and persistence: The case of the University of Texas Pan American. *Journal of Hispanic Higher Education*, 2, 73-97.
- Shotton, H. J., Oosahwe, E. S. L., & Cintrón, R. (2007). Stories of success: Experiences of Native American students in a peer-mentoring retention program. *The Review of Higher Education*, 31(1), 81-107.
- Shin, N. (2003). Traditional presence as a critical predictor of success in distance learning. *Distance Education*, 24(1), 69-86.
- Shin, N., & Chan, J.K.Y. (2004). Direct and indirect effects of online learning on distance education. *British Journal of Educational Technology*, 35(3), 275-288.
- Solís, E.J. (1995). Regression and path analysis models of Hispanic community college students'

intent to persist. *Community College Review*, 23 (3), 3-15.

Solutions for Our Future (2009). *Society*. Retrieved March 9, 2009, from

http://www.solutionsforourfuture.org/site/PageServer?pagename=society_r

Sorey, K.C., & Duggan, M. H. (2008). Differential predictors of persistence between community college adult and traditional-aged students. *Community College Journal of Research and Practice*, 32, 75-100.

Strauss, L.C., & Volkwein, J.F. (2004). Predictors of commitment at two-year and four-year institutions. *The Journal of Higher Education*, 75(2), 203-224.

Summers, M.D. (2003). ERIC Review: Attrition research at community colleges. *Community College Review*, 30, 64-84.

Survey of Entering Student Engagement (2009). *SENSE Releases 2008 National Report*.

Retrieved August 28, 2009, from <http://www.CCSSE.org/sense/index.cfm>

Terenzini, P.T., Springer, L., Pascarella, E.T., & Nora, A. (1995). Academic and out-of-class influences on students' intellectual orientations. *The Review of Higher Education*, 19(1), 23-44.

The Center for Community College Student Engagement (2011). *Dissertations on student engagement*. Retrieved November 2, 2011, from

<http://www.ccsse.org/center/resources/dissertations.cfm>

The Center for Community College Student Engagement (2010a). *The Center for Community College Student Engagement*. Retrieved September 16, 2011, from

<http://www.ccsse.org/center/>

The Center for Community College Student Engagement (2010b). *The heart of student success:*

Teaching, learning, and college completion. Retrieved September 16, 2011, from http://www.ccsse.org/center/resources/docs/publications/CCCSE_2010_national_report.pdf

The Community College Survey of Student Engagement (2010a). *2009 key findings*.

Retrieved March 19, 2010, from <http://www.ccsse.org/survey/survey.cfm>

The Community College Survey of Student Engagement (2010b). *About the survey*.

Retrieved March 26, 2010, from <http://www.ccsse.org/aboutsurvey/aboutsurvey.cfm>

The Community College Survey of Student Engagement (2010c). *Overview*.

Retrieved January 6, 2010, from <http://www.ccsse.org/aboutccsse/aboutccsse.cfm>

The Community College Survey of Student Engagement (2010d). *Sampling and*

administration. Retrieved April 13, 2010, from

<http://www.ccsse.org/aboutsurvey/sampling.cfm>

The Community College Survey of Student Engagement (2010e). *The Community*

College Student Report. Retrieved January 10, 2010, from

<http://www.ccsse.org/aboutsurvey/biblio/page1.cfm>

The Community College Survey of Student Engagement (2010f). *The Community College*

Student Report. Retrieved September 16, 2011, from

http://www.ccsse.org/aboutsurvey/CCSSE_2010_Special_Focus_Questions_copyright.pdf

The Community College Survey of Student Engagement (2010g). *Why focus on*

student engagement? Retrieved March 12, 2010, from

<http://www.ccsse.org/aboutccsse/engage.cfm>

Tinto, V. (1993). *Leaving college: rethinking the causes and cures of student attrition* (2nd ed.).

Chicago, IL: University of Chicago Press.

- U.S. Census Bureau (2000). *State and county quickfacts*. Retrieved June 17, 2010, from http://quickfacts.census.gov/qfd/meta/long_68178.htm
- U.S. Census Bureau (2002). *The big payoff: Educational attainment and synthetic estimates of work-life earnings*. Retrieved May 3, 2010, from <http://www.census.gov/prod/2002pubs/p23-210.pdf>
- U.S. Census Bureau (2008). *Population estimates*. Retrieved August 15, 2009, from <http://www.census.gov/popest/national/asrh/NC-EST2008-srh.html>
- U.S. Census Bureau (2009). *Projections of the Native American and Alaska Native alone population by age and sex for the United States*. Retrieved January 20, 2009, from <http://www.census.gov/population/www/projections/summarytables.html>
- U.S. Department of Education (2009). *Fast facts*. Retrieved March 11, 2009, from <http://nces.ed.gov/fastfacts/display.asp?id=77>
- Wilcox, P., Winn, S., & Fyvie-Gauld, M. (2005). It was nothing to do with the university, it was just the people: The role of social support in the first-year experience. *Studies in Higher Education, 30*(6), 707-722.
- Woosley, S. (2003). How important are the first few weeks of college? The long term effects of initial college experiences. *College Student Journal, 37*(2), 201-208.
- Yazedijan, A., Toews, M. L., & Navarro, A. (2009). Exploring parental factors, adjustment, and academic achievement among White and Hispanic college students. *Journal of College Student Development, 50*(4), 258-467.